IN THE CLAIMS:

1.- 7. (Cancelled)

8. (Original) A light source, being characterized by:

emitting light whose whiteness is no smaller than 85 and whose visual clarity index is no smaller than 110, the whiteness W being calculated using chroma C of the light and an equation (3),

$$W = -5.3C + 100 \ldots (3)$$

wherein the chroma C is calculated using a method defined by the CIE 1997 Interim Color Appearance Model (Simple Version).

9. (Original) The light source of Claim 8,

wherein the light source is a fluorescent lamp containing a phosphor layer, the light source emitting light whose peak emissions are in four wavelength ranges of 440nm to 470nm, 505nm to 530nm, 540nm to 570nm, and 600nm to 620nm; and

wherein a ratio of a radiant energy Qv to a radiant energy Qg satisfies an inequality (4) for a correlated color temperature T[K]

$$Qg / Qv \geqq - 0 . 11 \times 10^4 / T + 0 . 30 \ldots (4)$$

wherein the radiant energy Qv is in a wavelength of 380nm to 780nm and radiant energy Qg in a wavelength of 505nm to 530nm.

10. (Original) The light source of Claim 9,

wherein the phosphor layer contains, as major components:

a phosphor containing bivalent Europium as an emission center and having a peak emission at a wavelength range of 440nm to 470nm;

a phosphor containing bivalent manganese as an emission center and having a peak emission at a wavelength range of 505nm to 530nm;

a phosphor containing trivalent terbium as an emission center and having a peak emission at a wavelength range of 540nm to 570nm; and

a phosphor containing trivalent europium as an emission center and having a peak emission at a wavelength range of 600nm to 620nm.

11. (Original) The light source of Claim 10,

wherein the phosphor containing the bivalent europium as an emission center and having a peak emission at a wavelength range of 440nm to 470nm is composed of at least one of:

$BaMgAl_{10}O_{17}:Eu^{2+}$;

$BaMgAl_{10}O_{17}:Eu^{2+}$; Mn^{2+}; and

$(Ba, Ca, Sr, Mg)_{10}(PO_4)_6Cl_2:Eu^{2+}$

wherein compounds on the left side denote host crystals, and ions on the right side are emission centers contained in the phosphors.

12. (Original) The light source of Claim 10,

wherein the phosphor containing the bivalent manganese as an emission center and having a peak emission at a wavelength range of 505nm to 530nm is composed of at least one of:

$BaMgAl_{10}O_{17}:Eu^{2+}, Mn^{2+}$;

$CeMgAl_{11}O9: Mn^{2+}$;

$Ce\ (Mg, Zn)\ Al_{11}O_{19}:Mn^{2+}$;

Zn_2SiO_4: Mn^{2+}; and

$CeMgAl_{11}O_{19}$: Tb^{3+}, Mn^{2+}

wherein compounds on the left side denote host crystals, and ions on the right side are emission centers contained in the phosphors.

13. (Original) The light source of Claim 10,

wherein the phosphor containing the trivalent terbium as an emission center and having an emission peak at a wavelength range of 540nm to 570nm is composed of at least one of:

$LaPO_4$: Ce^{3+}, Tb^{3+}; and

$CeMgAl_{11}O_{19}$: Tb^{3+}

wherein compounds on the left side denote host crystals, and ions on the right side are emission centers contained in the phosphors.

14. (Original) The light source of Claim 10,

wherein the phosphor containing the trivalent europium as an emission center and having an emission peak at a wavelength range of 600nm to 620nm is composed of at least one of:

Y_2O_3: Eu^{3+}; and

Gd_2O_3: EU^{3+}

wherein compounds on the left side denote host crystals, and ions on the right side are emission centers contained in the phosphors.

15. (Original) The light source of Claim 9,

wherein the phosphor layer has, as major components:

a phosphor containing both bivalent europium and bivalent manganese as emission centers and having emission peaks both at a wavelength range of 440nm to 470nm and at 505nm to 530nm;

a phosphor containing trivalent terbium as an emission center and having an emission peak at a wavelength range of 540nm to 570nm; and

a phosphor containing trivalent europium as an emission center and having an emission peak at a wavelength range of 600nm to 620nm.

16. (Original) The light source of Claim 15,

wherein the phosphor containing the bivalent europium and bivalent manganese as emission centers and having emission peaks both at a wavelength range of 440nm to 470nm and at 505nm to 530nm is

$BaMgAl_{10}O_{17}:EU^{2+}, Mn^{2+}$

wherein a compound on the left side denotes a host crystal, and ions on the right side are emission centers contained in the phosphor.

17. (Original) The light source of Claim 15,

wherein the phosphor containing the trivalent terbium as an emission center and having an emission peak at a wavelength range of 540nm to 570nm is composed of at least one of:

$LaPO_4:Ce^{3+}, Tb^{3+}$; and

$CeMgAl_{11}O_{19}: Tb^{3+}$

wherein compounds on the left side denote host crystals, and ions on the right side are emission centers contained in the phosphors.

18. (Original) The light source of Claim 15,

wherein the phosphor containing the trivalent europium as an emission center and having an emission peak at a wavelength range of 600nm to 620nm is composed of at least one of:

$Y_2O_3:Eu^{3+}$; and

$Gd_2O_3:Eu^{3+}$

wherein compounds on the left side denote host crystals, and ions on the right side are emission centers contained in the phosphors.

19. (Original) The light source of Claim 9,

wherein the phosphor layer contains, as major components:

a phosphor containing bivalent europium as an emission center and having an emission peak at 440nm to 470nm;

a phosphor containing both trivalent terbium and bivalent manganese as emission centers and having emission peaks both at a wavelength range of 505nm to 530nm and at 540nm to 570nm; and

a phosphor containing trivalent europium as an emission center and having an emission peak at 600nm.

20. (Original) The light source of Claim 19,

wherein the phosphor containing the bivalent europium as an emission center and having a peak emission at a wavelength range of 440nm to 470nm is composed of at least one of:

$BaMgAl_{10}O_{17}:Eu^{2+}$;

$BaMgAl_{10}O_{17}:Eu^{2+}$; Mn^{2+}; and

$(Ba, Ca, Sr, Mg)_{10}(PO_4)_6Cl_2:Eu^{2+}$

wherein compounds on the left side denote host crystals, and ions on the right side are emission centers contained in the phosphors.

21. (Original) The light source of Claim 19,

wherein the phosphor containing the trivalent terbium and the bivalent manganese as emission centers and having peak emissions both at a wavelength range of 505nm to 530nm and at 540nm to 570nm is

$CeMgAl_{11}O_{19}:Tb^{3+}, Mn^{2+}$

wherein a compound on the left side denotes a host crystal, and ions on the right side are emission centers contained in the phosphor.

22. (Original) The light source of Claim 19,

wherein the phosphor containing the trivalent europium as an emission center and having an emission peak at a wavelength range of 600nm to 620nm is composed of at least one of:

$Y_2O_3:Eu^{3+}$; and

$Gd_2O_3:Eu^{3+}$

wherein compounds on the left side denote host crystals, and ions on the right side are emission centers contained in the phosphors.

23. (Original) A light source, being characterized by:

emitting light whose whiteness W is no smaller than 85, and whose visual clarity index is no smaller than 115, the whiteness W being calculated using chroma C of the light and an equation(5)

$$W = -5.3C + 100 \ldots (5)$$

wherein the chroma C is calculated using a method defined by the CIE 1997 InterimColor Appearance Model (Simple Version).

24. (Original) The light source of Claim 23,

wherein the light source is a fluorescent lamp containing a phosphor layer, the light source emitting light whose peak emissions are in four wavelength ranges of 440nm to 470 nm, 505 nm to 530nm, 540nm to 570nm, and 600nm to 620nm; and

wherein a ratio of a radiant energy Qv to a radiant energy Qg satisfies an inequality (6) for a correlated color temperature T[K]

$$Qg / Qv \geqq -0.11 \times 10^4 / T + 0.30 \ldots (6)$$

wherein the radiant energy Qv is in a wavelength of 380nm to 780nm and radiant energy Qg in a wavelength of 505nm to 530nm.

25. (Original) The light source of Claim 24,

wherein the phosphor layer contains, as major components:

a phosphor containing bivalent Europium as an emission center and having a peak emission at a wavelength range of 440nm to 470nm;

a phosphor containing bivalent manganese as an emission center and having a peak emission at a wavelength range of 505nm to 530nm;

a phosphor containing trivalent terbium as an emission center and having a peak emission at a wavelength range of 540nm to 570nm; and

a phosphor containing trivalent europium as an emission center and having a peak emission at a wavelength range of 600nm to 620nm.

26. (Original) The light source of Claim 25,

wherein the phosphor containing the bivalent europium as an emission center and having a peak emission at a wavelength range of 440nm to 470nm is composed of at least one of:

$BaMgAl_{10}O_{17}:Eu^{2+}$;

$BaMgAl_{10}O_{17}:Eu^{2+}, Mn^{2+}$; and

$(Ba, Ca, Sr, Mg)_{10}(PO_4)_6Cl_2:Eu^{2+}$

wherein compounds on the left side denote host crystals, and ions on the right side are emission centers contained in the phosphors.

27. (Original) The light source of Claim 25,

wherein the phosphor containing the bivalent manganese as an emission center and having a peak emission at a wavelength range of 505nm to 530nm is composed of at least one of:

$BaMgAl_{10}O_{17}:Eu^{2+}, Mn^{2+}$;

$CeMgAl_{11}O19:Mn^{2+}$;

$Ce\ (Mg, Zn)\ Al_{11}O_{19}:Mn^{2+}$;

$Zn_2SiO_4: Mn^{2+}$; and

$CeMgAl_{11}O_{19}:Tb^{3+}, Mn^{2+}$

wherein compounds on the left side denote host crystals, and ions on the right side are emission centers contained in the phosphors.

28. (Original) The light source of Claim 25,

wherein the phosphor containing the trivalent terbium as an emission center and having an emission peak at a wavelength range of 540nm to 570nm is composed of at least one of:

$LaPO_4:Ce^{3+}, Tb^{3+}$; and

$CeMgAl_{11}O_{19}:Tb^{3+}$

wherein compounds on the left side denote host crystals, and ions on the right side are emission centers contained in the phosphors.

29. (Original) The light source of Claim 25,

wherein the phosphor containing the trivalent europium as an emission center and having an emission peak at a wavelength range of 600nm to 620nm is composed of at least one of:

$Y_2O_3:Eu^{3+}$; and

$Gd_2O_3:Eu^{3+}$

wherein compounds on the left side denote host crystals, and ions on the right side are emission centers contained in the phosphors.

30. (Original) The light source of Claim 24,

wherein the phosphor layer has, as major components:

a phosphor containing both bivalent europium and bivalent manganese as emission centers and having emission peaks both at a wavelength range of 440nm to 470nm and at 505nm to 530nm;

a phosphor containing trivalent terbium as an emission center and having an emission peak at a wavelength range of 540nm to 570nm; and

a phosphor containing trivalent europium as an emission center and having an emission peak at a wavelength range of 600nm to 620nm.

31. (Original) The light source of Claim 30,

wherein the phosphor containing the bivalent europium and bivalent manganese as emission centers and having emission peaks both at a wavelength range of 440nm to 470nm and at 505nm to 530nm is

$BaMgAl_{10}O_{17}:Eu^{2+}, Mn^{2+}$

wherein a compound on the left side denotes a host crystal, and ions on the right side are emission centers contained in the phosphor.

32. (Original) The light source of Claim 30,

wherein the phosphor containing the trivalent terbium as an emission center and having an emission peak at a wavelength range of 540nm to 570nm is composed of at least one of:

$LaPO_4:Ce^{3+}, Tb^{3+}$; and

$CeMgAl_{11}O_{19}:Tb^{3+}$

wherein compounds on the left side denote host crystals, and ions on the right side are emission centers contained in the phosphors.

33. (Original) The light source of Claim 30,

wherein the phosphor containing the trivalent europium as an emission center and having an emission peak at a wavelength range of 600nm to 620nm is composed of at least one of:

$Y_2O_3:EU^{3+}$; and

$Gd_2O_3: EU^{3+}$

wherein compounds on the left side denote host crystals, and ions on the right side are emission centers contained in the phosphors.

34. (Original) The light source of Claim 24,

wherein the phosphor containing the bivalent europium as an emission center and having a peak emission at a wavelength range of 440nm to 470nm is composed of at least one of:

$BaMgAl_{10}O_{17}:Eu^{2+}$;

$BaMgAl_{10}O17:Eu^{2+}$, Mn^{2+}; and

$(Ba, Ca, Sr, Mg)_{10} (PO_4)_6C1_2:Eu^{2+}$

wherein compounds on the left side denote host crystals, and ions on the right side are emission centers contained in the phosphors.

35. (Original) The light source of Claim 34,

wherein the phosphor containing the bivalent europium as an emission center and having a peak emission at a wavelength range of 440nm to 470nm is composed of at least one of:

$BaMgAl_{10}O_{17}:Eu^{2+}$;

$BaMgAl_{10}O_{17}:Eu_{2+}$, Mn^{2+}; and

$(Ba, Ca, Sr, Mg)_{10}(PO_4)_6Cl_2:Eu^{2+}$

wherein compounds on the left side denote host crystals, and ions on the right side are emission centers contained in the phosphors.

36. (Original) The light source of Claim 34,

wherein the phosphor containing the trivalent terbium and the bivalent manganese as emission centers and having peak emissions both at a wavelength range of 505nm to 530nm and at 540nm to 570nm is

$CeMgAl_{11}O_{19}:Tb^{3+}, Mn^{2+}$

wherein a compound on the left side denotes a host crystal, and ions on the right side are emission centers contained in the phosphor.

37. (Original) The light source of Claim 34,

wherein the phosphor containing the trivalent europium as an emission center and having an emission peak at a wavelength range of 600nm to 620nm is composed of at least one of:

$Y_2O_3:Eu^{3+}$; and

$Gd_2O_3:Eu^{3+}$

wherein compounds on the left side denote host crystals, and ions on the right side are emission centers contained in the phosphors.

38. – 67. (Cancelled)

68. (Original) A luminaire, being characterized by:

emitting light whose whiteness is no smaller 85 and whose visual clarity index is no smaller than 110, the whiteness W being calculated using chroma C of the light and an equation (15),

$$W = -5.3C + 100 \ldots (15)$$

wherein the chroma C is calculated using a method defined by the CIE 1997 Interim Color Appearance Model (Simple Version).

69. (Original) The luminaire of Claim 68,

wherein the light source is a fluorescent lamp containing a phosphor layer, the light source emitting light whose peak emissions are in four wavelength ranges of 440nm to 470nm, 505nm to 530nm, 540nm to 570nm, and 600nm to 620nm; and

wherein a ratio of a radiant energy Qv to a radiant energy Qg satisfies an inequality (16) for a correlated color temperature T[K]

$$Qg/Qv \geqq -0.11\text{x}10^4/T+0.30 \ldots (16)$$

wherein the radiant energy Qv is in a wavelength of 380nm to 780nm and radiant energy Qg in a wavelength of 505nm to 530nm.

70. (Original) The luminaire of Claim 68,

wherein the light from the light source is adjusted to a specified spectrum after passing through the translucent cover.

71. (Original) The luminaire of Claim 68,

wherein the light from the light source is adjusted to a specified spectrum after reflected from the reflector.

72. (Original) A luminaire, being characterized by:

emitting light whose whiteness W is no smaller than 85, and whose visual clarity index is no smaller than 115, the whiteness W being calculated using chroma C of the light and an equation (17)

$$W = -5.3C + 100 \ldots (17)$$

wherein the chroma C is calculated using a method defined by the CIE 1997 InterimColor Appearance Model (Simple Version).

73. (Original) The luminaire of Claim 72,

wherein the light source is a fluorescent lamp containing a phosphor layer, the light source emitting light whose peak emissions are in four wavelength ranges of 440nm to 470nm, 505nm to 530nm, 540nm to 570nm, and 600nm to 620nmi and

wherein a ratio of a radiant energy Qv to a radiant energy Qg satisfies an inequality (18) for a correlated color temperature T[K]

$$Qg/Qv \geqq -0.11\text{x}10^4/T+0.30 \ldots (18)$$

wherein the radiant energy Qv is in a wavelength of 380nm to 780nm and radiant energy Qg in a wavelength of 505nm to 530nm.

74. (Original) The luminaire of Claim 72,

wherein the light from the light source is adjusted to a specified spectrum after passing through the translucent cover.

75. (Original) The luminaire of Claim 72,

wherein the light from the light source is adjusted to a specified spectrum after reflected from the reflector.

76. – 83. (Cancelled)